

City of Waterville
DEPARTMENT OF PUBLIC WORKS
6 Wentworth Court
Waterville, Maine 04901-4892

TEL (207) 680-4744 FAX (207) 877-7532

REQUEST FOR BIDS
Dual Axle - Cab/Chassis - 66,000 G.V.W.
25 Cubic Yard High Density 60/40 Split Compartment
Rear Loading Refuse Collection/Compacting Body

DATE: August 4, 2017

INSTRUCTIONS TO BIDDERS

1. GENERAL: The City of Waterville is accepting bids for a **Dual Axle Cab/Chassis 66,000 G.V.W. w/ 25 Cubic Yard High Density 60/40 Split Compartment Rear Loading Refuse Collection/Compacting Body** meeting the specifications accompanying this document.

2. BID SUBMITTAL: Sealed bids will be accepted by the Office of the Director of Public Works, 6 Wentworth Court, Waterville, Maine 04901-4892 up to and including **10:00 A.M. local time, Friday, August 25, 2017** at which time they will be publicly opened and read. All bids will be placed in a sealed envelope clearly marked **"Bid – Packer Truck"** in the center with the bidder's name and address in the upper left hand corner. Bids not dated and time stamped by the Office of the Director of Public Works prior to the specified date and time stated above will be returned unopened. Facsimile bids will only be accepted by arrangement with the Office of the Public Works Director. **Arrangements may be made by contacting Fred Dechaine at (207) 680-4746, fdecahine@waterville-me.gov or by faxing him directly at (207) 877-7532**

3. WITHDRAWAL OR REVISION OF BID: A bidder may withdraw or revise a bid after it has been received by the Office of the Director of Public Works, provided the request is made in writing or in person before the time set for bid opening.

4. BID AWARD: Bid award, if the City determines to award, will be made within thirty (30) calendar days after bid opening, to the lowest responsible bidder whose bid fully complies with the requirements specified contingent upon approval by the City Council. The City reserves the right to reject any and/or all bids without absorbing any liability against the City.

5. EVALUATION OF BIDS: For purposes of evaluating the bids, in the event of any discrepancies on a proposal between an amount written out in words versus the same amount expressed in numbers, the amount written in words shall govern (if applicable). Similarly, unit prices shall prevail over extended totals. In the event of Additive Bid Items, the "low bid" shall be based upon the least total for the highest combination of bid items that may be awarded within the Control Amount (i.e. a predetermined budget amount to be disclosed at the time of bid opening). In the event that all Base Bids exceed the Control Amount, the "low bid" shall be based solely upon the lowest Base Bid submitted. Bidders shall examine and familiarize themselves with the Specifications and Bid Documents. The bidder shall in no way be relieved of any obligation to provide the product, service and/or equipment specified through error, mistake or omission.

INSTRUCTION TO BIDDERS

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6. INTERPRETATION OF ADDENDA: It shall be the bidder's responsibility to make inquiry as to any interpretation of the specifications or requirements of the participants. Any noted changes in the specifications shall be by written addenda.

7. SPECIFIED QUANTITY: One (1) Unit

8. INVOICES AND PAYMENT: Invoices shall be transmitted to the City of Waterville, 1 Common Street, Waterville, Maine 04901-6699. It is the practice of the City of Waterville to pay invoices within thirty (30) days of receipt. **The City is exempt from State of Maine Sales Tax.**

9. PENALTY CLAUSE: N/A

10. INSURANCE: N/A

11. PERFORMANCE BOND: Not Required

12. CANCELLATION: The City reserves the right to cancel any unfulfilled portion of the Contract if, in the opinion of the City, the services or materials supplied are unsatisfactory or are not in compliance with the terms and conditions of the specifications. Cancellation shall be effective following ten (10) calendar days written notice to the Bidder.

13. EXCEPTIONS TO SPECIFICATIONS: These instructions to Bidders and General Paragraphs are an integral part of the Specifications for a **Dual Axle Cab/Chassis 66,000 G.V.W. w/25 Cubic Yard High Density 60/40 Split Compartment Rear Loading Refuse Collection/Compacting Body** and will be binding on the Bidder. Bidders are advised that they shall be bound to the requirements of the Specifications, Instructions to Bidders and General Paragraphs unless exceptions are otherwise clearly noted in the Proposal. Any exceptions shall be considered, however, in determining the most acceptable proposal.

14. INQUIRIES: Any questions concerning this bid request should be directed to Frederick Dechaine, Fleet maintenance Supervisor, 6 Wentworth Court, Waterville, Maine 04901. Telephone inquiries can be made by calling (207) 680-4746 between the hours of 7:00 AM & 3:00 PM Monday through Friday.

15. GENERAL PARAGRAPHS: See Attached Bid Specifications

SPECIFICATIONS

Dual Axle Truck/Chassis 66,000 GVW

Vehicle Configuration

2018 MODEL YEAR SPECIFIED (2017 Models, if available, will be considered)

SET BACK AXLE - TRUCK

STRAIGHT TRUCK PROVISION

LH PRIMARY STEERING LOCATION

Truck Service

REFUSE - REAR PACKER BODY - UNLOADS IN A LANDFILL AND/OR WASTE TRANSFER FACILITY

Engine

ENGINE: 12.8L 410 HP @ 1625 RPM, 1900 GOV RPM, 1450 LB/FT @ 975 RPM

FILTERS FOR FIRST SERVICE: OIL, FUEL, AIR

Electronic Parameters

70 MPH ROAD SPEED LIMIT

CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT

PTO MODE ENGINE RPM LIMIT - 900 RPM

PTO MODE BRAKE OVERRIDE - SERVICE BRAKE APPLIED OR PARK BRAKE NOT APPLIED

PTO RPM WITH CRUISE SET SWITCH - 600 RPM

PTO RPM WITH CRUISE RESUME SWITCH - 600 RPM

PTO MODE CANCEL VEHICLE SPEED - 5 MPH

PTO MODE RPM INCREMENT - 25 RPM

PTO GOVERNOR RAMP RATE - 250 RPM PER SECOND

ONE REMOTE PTO SPEED

REMOTE PTO SPEED 1 SETTING - 900 RPM

SOFT CRUISE CONTROL ENABLED

PTO MINIMUM RPM - 600

Engine Equipment

2016 ONBOARD DIAGNOSTICS/2010 EPA/CARB/GHG17

2008 CARB EMISSION CERTIFICATION - CLEAN IDLE (INCLUDES 6X4 INCH LABEL ON LOWER FORWARD CORNER OF DRIVER DOOR)

NO 2013 ENGINE ESCALATOR

STANDARD OIL PAN

ENGINE MOUNTED OIL CHECK AND FILL

ONE PIECE VALVE COVER

SIDE OF HOOD AIR INTAKE WITH DONALDSON HIGH CAPACITY AIR CLEANER WITH SAFETY ELEMENT, FIREWALL MOUNTED

DR 12V 160 AMP 28-SI QUADRAMOUNT PAD ALTERNATOR WITH REMOTE BATTERY VOLT SENSE

(3) ALLIANCE ABSORBED GLASS MAT MODEL 7A31, GROUP 31, 12 VOLT MAINTENANCE FREE 2190 CCA THREADED STUD BATTERIES
WIRE GROUND RETURN FOR BATTERY CABLE WITH ADDITIONAL FRAME GROUND RETURN
PLASTIC BATTERY BOX COVER
BW MODEL BA-921 19.0 CFM SINGLE CYLINDER
AIR COMPRESSOR WITH SAFTY VALVE
AIR COMPRESSOR DISCHARGE LINE
ELECTRONIC ENGINE INTEGRAL SHUTDOWN
PROTECTION SYSTEM
JACOBS COMPRESSION BRAKE
RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH B-PILLAR MOUNTED VERTICAL TAILPIPE
ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD REGEERATION DASH MOUNTED REGENERATION SWITCH
11 FOOT 06 INCH (138 INCH+0/-5.9 INCH) EXHAUST SYSTEM HEIGHT
RH CURVED VERTICAL TAILPIPE B-PILLAR MOUNTED ROUTED FROM STEP
6 GALLON DIESEL EXHAUST FLUID TANK
100 PERCENT DIESEL EXHAUST FLUID FILL
STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING
LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION
STAINLESS STEEL AFTERTREATMENT DEVICE/MUFFLER/TAILPIPE SHIELD
BORG WARNER (KYSOR) REAR AIR ON/OFF ENGINE FAN CLUTCH
AUTOMATIC FAN CONTROL WITHOUT DASH SWITCH, NON ENGINE MOUNTED
DDC SUPPLIED ENGINE MOUNTED FUEL FILTER/FUEL WATER SEPARATOR WITH WATER-IN-FUEL INDICATOR
FULL FLOW OIL FILTER
1500 SQUARE INCH ALUMINUM RADIATOR
MOUNTING FOR FIREWALL MOUNTED SURGE TANK
ANTIFREEZE TO -34F, OAT (NITRITE AND SILICATE FREE) EXTENDED LIFE COOLANT
GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT
CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES
HDEP FIXED RATIO COOLANT PUMP AND RADIATOR DRAIN VALVE
1350 ADAPTER FLANGE FOR FRONT PTO PROVISION
PHILLIPS-TEMRO 1500 WATT/115 VOLT BLOCK HEATER
PHILLIPS-TEMRO 300 WATT/115 VOLT OIL PREHEATER
CHROME ENGINE HEATER RECEPTACLE MOUNTED UNDER LH DOOR
ALUMINUM FLYWHEEL HOUSING
DELCO 12V MOD 3.175-39MT+ OCP STARTER WITH THERMAL PROTECTION AND INTEGRATED MAGNETIC SWITCH

Transmission

ALLISON 4500 RDS AUTOMATIC TRANSMISSION WITH PTO PROVISION

Transmission Equipment

ALLISON VOCATIONAL PACKAGE 142 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODEL RDS
ALLISON VOCATIONAL RATING FOR REFUSE APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES
PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY
SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY
BODY LIGHTING INTERFACE BLUNT CUT WIRING WITH FUSE PANEL WIRE MOUNTED BETWEEN DRIVER AND PASSENGER SEATS WITH ADDITIONAL 150 AMP SERVICE

ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR, BLUNT CUT, MOUNTED BETWEEN DRIVER AND PASSENGER SEATS
MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN
PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED
TRANSMISSION PROGNOSTICS - ENABLED 2013
WATER TO OIL TRANSMISSION COOLER, FRAME MOUNTED
TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK
SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)

Front Axle and Equipment

DETROIT DA-F-20.0-5 20,000# FL1 71.0 KPI/3.74 DROP SINGLE FRONT AXLE
MERITOR 16.5X6 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES
NON-ASBESTOS FRONT BRAKE LINING
CONMET CAST IRON FRONT BRAKE DRUMS
SKF SCOTSEAL PLUS XL FRONT OIL SEALS
VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL
STANDARD SPINDLE NUTS FOR ALL AXLES
HALDEX AUTOMATIC FRONT SLACK ADJUSTERS
STANDARD KING PIN BUSHINGS
TRW THP-60 POWER STEERING WITH RCH45 AUXILIARY GEAR
POWER STEERING PUMP
4 QUART POWER STEERING RESERVOIR
OIL/AIR POWER STEERING COOLER

Front Suspension

20,000# FLAT LEAF FRONT SUSPENSION
THREADED SPRING PINS AND BUSHINGS - FRONT SUSPENSION
FRONT SHOCK ABSORBERS

Rear Axle and Equipment

RT-46-164P 46,000# R-SERIES TANDEM REAR AXLE
4.10 REAR AXLE RATIO
IRON REAR AXLE CARRIER WITH STANDARD AXLE HOUSING
MXL 18T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES
MXL 17T MERITOR EXTENDED LUBE INTERAXLE DRIVELINE WITH HALF ROUND YOKES
DRIVER CONTROLLED TRACTION DIFFERENTIAL - BOTH TANDEM REAR AXLES
INDICATOR LIGHT FOR EACH INTERAXLE LOCKOUT SWITCH
INDICATOR LIGHT FOR EACH DRIVER CONTROLLED TRACTION DEVICE SWITCH
MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES
NON-ASBESTOS REAR BRAKE LINING
STANDARD BRAKE CHAMBER LOCATION
CONMET CAST IRON REAR BRAKE DRUMS
SKF SCOTSEAL PLUS XL REAR OIL SEALS
HALDEX GOLDSEAL LONGSTROKE 2-DRIVE AXLES SPRING PARKING CHAMBERS
HALDEX AUTOMATIC REAR SLACK ADJUSTERS
SYNTHETIC 75W-90 REAR AXLE LUBE

Rear Suspension

HENDRICKSON HAULMAAX REAR SUSPENSION @ 46,000#
HENDRICKSON HAULMAAX/ULTIMAAX - 10.50" RIDE HEIGHT
54 INCH AXLE SPACING
HENDRICKSON HN, HAULMAAX AND ULTIMAAX SERIES STEEL BEAMS WITH BAR PIN
FORE/AFT AND TRANSVERSE CONTROL RODS
REAR SHOCK ABSORBERS - TWO AXLES (TANDEM)

Brake System

WABCO 4S/4M ABS WITHOUT TRACTION CONTROL
REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES
FIBER BRAID PARKING BRAKE HOSE
STANDARD BRAKE SYSTEM VALVES
RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE
WABCO SS-1200 PLUS AIR DRYER WITH INTEGRAL AIR GOVERNOR AND HEATER
WABCO OIL COALESCING FILTER FOR AIR DRYER
AIR DRYER MOUNTED INBOARD ON LH RAIL
ALUMINUM AIR BRAKE RESERVOIRS
CLEAR FRAME RAIL FROM BACK OF CAB TO FRONT REAR SUSPENSION BRACKET, RH RAIL INSIDE/OUTBOARD AND BELOW
PULL CABLES ON ALL AIR RESERVOIR(S)

Wheelbase & Frame

5900MM (232 INCH) WHEELBASE
1/2X3.64X11-7/8 INCH STEEL FRAME (12.7MMX301.6MM/0.5X11.88 INCH) 120KSI
PARTIAL INNER FRAME REINFORCEMENT AT FRONT SUSPENSION
1600MM (63 INCH) REAR FRAME OVERHANG
FRAME OVERHANG RANGE: 61 INCH TO 70 INCH
24 INCH INTEGRAL FRONT FRAME EXTENSION
CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 168.69 in
CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 165.69 in
CALC'D FRAME LENGTH - OVERALL : 364.61
CALC'D SPACE AVAILABLE FOR DECKPLATE : 168.69 in
CALCULATED FRAME SPACE LH SIDE : 99.45 in
CALCULATED FRAME SPACE RH SIDE : 110.61 in
SQUARE END OF FRAME
STANDARD WEIGHT ENGINE CROSSMEMBER
STANDARD CROSSMEMBER BACK OF TRANSMISSION
STANDARD MIDSHIP #1 CROSSMEMBER(S)
STANDARD REARMOST CROSSMEMBER
STANDARD WEIGHT REAR SUSPENSION CROSSMEMBER

Chassis Equipment

14 INCH CHROMED STEEL BUMPER
BUMPER MOUNTING FOR SINGLE LICENSE PLATE
FRONT ANTI-SPRAY CAB MOUNTED MUDFLAPS
GRADE 8 THREADED HEX HEADED FRAME FASTENERS

Fuel Tanks

80 GALLON/302 LITER ALUMINUM FUEL TANK - LH
25 INCH DIAMETER FUEL TANK(S)
PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH POLISHED STAINLESS STEEL BANDS
FUEL TANK(S) FORWARD
PLAIN STEP FINISH
FUEL TANK CAP(S)
EQUIFLO INBOARD FUEL SYSTEM
HIGH TEMPERATURE REINFORCED NYLON FUEL LINE
NO FUEL COOLER

Tires

MICHELIN XFE 425/65R22.5 20 PLY RADIAL FRONT TIRES
WITH SPARE WHEEL & TIRE
MICHELIN XDS2 11R22.5 16 PLY RADIAL REAR TIRES
WITH SPARE WHEEL & TIRE

Hubs

CONMET PRESET PLUS IRON FRONT HUBS
CONMET PRESET PLUS IRON REAR HUBS

Wheels

ACCURIDE 29807 22.5X12.25 10-HUB PILOT 4.75 INSET 5-HAND STEEL DISC FRONT WHEELS
ACCURIDE 28828 22.5X8.25 10-HUB PILOT 2-HAND HD STEEL DISC REAR WHEELS
FRONT WHEEL MOUNTING NUTS
REAR WHEEL MOUNTING NUTS

Cab Exterior

110 INCH BBC STEEL CONVENTIONAL CAB
PAINTED ALUMINUM CAB SKIRT
AIR CAB MOUNTS WITH CHECK VALVE
NONREMOVABLE BUGSCREEN MOUNTED BEHIND GRILLE
FRONT FENDERS
2 INCH FENDER EXTENSIONS
LH AND RH EXTERIOR GRAB HANDLES WITH RUBBER INSERTS AND RH INTERIOR GRAB HANDLE MOUNTED TO A POST
STATIONARY BRIGHT FINISH GRILLE
CHROME HOOD MOUNTED AIR INTAKE GRILLE
GALVANEALD STEEL SEVERE SERVICE CAB
FIBERGLASS HOOD
HOOD LINER INSULATION WITH SINGLE FIREWALL INSULATION
DUAL HADLEY SD-978 26 INCH RECTANGULAR AIR HORNS
SINGLE ELECTRIC HORN
DUAL HORN SHIELDS
DOORS AND IGNITION KEYED THE SAME
SINGLE RECTANGULAR SEALED BEAM HEADLIGHTS WITH BRIGHT BEZELS

LED MARKER LAMPS
INTEGRAL STOP/TAIL/BACKUP LIGHTS
STANDARD FRONT TURN SIGNAL LAMPS
DUAL WEST COAST STAINLESS STEEL HEATED MIRRORS WITH RH REMOTE
DOOR MOUNTED MIRRORS
102 INCH EQUIPMENT WIDTH
LH AND RH 8 INCH STAINLESS STEEL CONVEX
MIRRORS MOUNTED BELOW PRIMARY MIRRORS
RH DOWN VIEW MIRROR
CAB MOUNTED STROBE LIGHTS
RAIN GUARDS ON BOTH DOORS
5 LBS. FIRE EXTINGUISHER
RH AND LH 8 INCH STAINLESS STEEL FENDER MOUNTED CONVEX MIRRORS WITH TRIPOD BRACKETS
STANDARD SIDE/REAR REFLECTORS
RH AFTERTREATMENT SYSTEM CAB ACCESS WITH PLAIN DIAMOND PLATE COVER
FIBERGLASS EXTERIOR SUN VISOR
17.5X35 INCH TINTED REAR WINDOW
TINTED DOOR GLASS
RH AND LH ELECTRIC POWERED WINDOWS
LOWER RH DOOR WINDOW WITH FRESNEL LENS
2-PIECE TINTED CURVED GASKET MOUNTED HEATED WINDSHIELD
2 GALLON WINDSHIELD WASHER RESERVOIR WITHOUT FLUID LEVEL INDICATOR, MOUNTED UNDER CAB, WITH
REMOTE FILL

Cab Interior

GRAY VINYL BASE INTERIOR
BLACK HARD TRIM
BASE LEFT HAND DOOR TRIM
BASE RIGHT HAND DOOR TRIM
BLACK MATS WITH DOUBLE INSULATION
DASH MOUNTED ASH TRAY AND LIGHTER, DRIVER SIDE
FORWARD ROOF MOUNTED CONSOLE
PASSENGER SIDE WING DASH MOUNTED GLOVE BOX WITH LOCKING DOOR
LH AND RH DOOR MAP POCKETS
COAT HOOK ON RH BACKWALL OF CAB
(1) CUP HOLDER MOUNTED IN BOTTOM CENTER OF DASH
TWO-TONE CHARCOAL UPPER/COOL GRAY LOWER SOFT TOUCH WING DASH WITH BLACK DRIVER SIDE COSMETIC
UNDER DASH COVER
STANDARD WIRING
(1) DASH MOUNTED WINDSHIELD FAN
5 LB. FIRE EXTINGUISHER
HEATER, DEFROSTER AND AIR CONDITIONER WITH CONSTANT OUTLET TEMPERATURE CONTROL
HVAC DUCTING WITH FOAM MAIN FRESH AIR FILTER AND OUTSIDE PRE-FILTER
MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH
STANDARD HEATER PLUMBING WITH BALL SHUTOFF VALVES AT SUPPLY LINES ONLY
DENSO HEAVY DUTY AIR CONDITIONER COMPRESSOR
RADIATOR MOUNTED AIR CONDITIONER CONDENSER
BINARY CONTROL, R-134A
CAB INSULATION
AUTOMATIC SELF-RESET CIRCUIT BREAKER IN MAIN DASH POWER DISTRIBUTION BOX AND CIRCUIT BREAKER/FUSE
IN AUXILIARY POWER DISTRIBUTION BOXES

DOOR ACTIVATED DOME LIGHT, UNDER DASH LIGHT AND LH AND RH DOOR MOUNTED COURTESY LIGHTS
CAB DOOR LATCHES WITH MANUAL DOOR LOCKS
(1) 12 VOLT POWER SUPPLY IN DASH
TRIANGULAR REFLECTORS KIT WITHOUT FLARES SHIPPED LOOSE IN CAB
BASIC HIGH BACK AIR SUSPENSION DRIVER SEAT WITH 1 CHAMBER AIR LUMBAR, INTEGRATED CUSHION EXTENSION
AND REAR CUSHION TILT
NATIONAL 2 MAN TOOL/BATTERY BOX MID BACK NON SUSPENSION PASSENGER SEAT
BLACK MORDURA CLOTH DRIVER SEAT COVER
BLACK MORDURA CLOTH PASSENGER SEAT COVER
3 POINT DRIVER AND PASSENGER AND 2 POINT CENTER FRONT SEAT BELT RETRACTORS
ADJUSTABLE TILT AND TELESCOPING STEERING COLUMN
2-SPOKE 18 INCH (450MM) BLACK STEERING WHEEL(S)
DRIVER AND PASSENGER INTERIOR SUN VISORS

Instruments & Controls

NON-ADJUSTABLE SUSPENDED PEDALS
STAR GAUGES WITH BLACK BEZELS
BLACK DRIVER INSTRUMENT PANEL
BLACK CENTER INSTRUMENT PANEL
LOW AIR PRESSURE INDICATOR LIGHT AND AUDIBLE ALARM
2 INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES
DASH MOUNTED AIR RESTRICTION INDICATOR WITH GRADUATIONS
97 DB BACKUP ALARM
CRUISE CONTROL SWITCHES IN THE CENTER PANEL
KEY OPERATED IGNITION SWITCH AND INTEGRAL START POSITION; 4 POSITION OFF/RUN/START/ACCESSORY
WARNING LAMP/LIGHT BAR DISPLAY, NON-DATA LINKED
2 INCH ELECTRIC FUEL GAUGE
FUEL FILTER RESTRICTION INDICATOR
PROGRAMMABLE RPM CONTROL - ELECTRONIC ENGINE
ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE
ENGINE OIL TEMPERATURE GAUGE
2 INCH TRANSMISSION OIL TEMPERATURE GAUGE
ELECTRIC ENGINE OIL PRESSURE GAUGE
AM/FM RADIO WITH FRONT AND REAR AUXILIARY INPUTS AND J1939
ROOF/OVERHEAD CONSOLE MOUNTED RADIO
(4) RADIO SPEAKERS IN CAB
AM/FM ANTENNA MOUNTED ON RH FRONT A-PILLAR
POWER AND GROUND WIRING FOR CB RADIO IN OVERHEAD CONSOLE
MULTI-BAND AM/FM/WB/CB LH MIRROR MOUNTED ANTENNA SYSTEM
ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITH ODOMETER
STANDARD VEHICLE SPEED SENSOR
ELECTRONIC 3000 RPM TACHOMETER WITH HOUR METER
NO VEHICLE PERFORMANCE MONITOR
IGNITION SWITCH CONTROLLED ENGINE STOP
SIX IGNITION CONTROLLED EXTRA SWITCHES WITH INDICATOR LIGHT, 20 AMPS, WIRED BEHIND PASSENGER SEAT 2
INCH VOLTMETER
SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY
CAB/TRAILER MARKER LIGHT SWITCH WITH SEPARATE HEADLIGHT SWITCH
ONE VALVE PARKING BRAKE SYSTEM WITH WARNING INDICATOR
VSM NON CANCELING TURN SIGNAL SWITCH WITH INTEGRAL HEADLAMP DIMMER WITHOUT BRAKE OVERRIDE
PACIFIC INSIGHT ELECTRONIC FLASHER

Design

PAINT: ONE SOLID COLOR

Color Preference (**Note – May accept substitute of alternate color on ready-built units)

CAB COLOR A: L6389EB OMAHA ORANGE ELITE BC

CAB INTERIOR PAINTED SAME AS CAB COLOR

BODY COLOR: L6389EB OMAHA ORANGE ELITE BC

BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT

POWDER WHITE (N0006EA) FRONT WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)

POWDER WHITE (N0006EA) REAR WHEELS/RIMS (PKWHT21, TKWHT21, W, TW)

SUNVISOR PAINTED SAME AS CAB COLOR A

Certification / Compliance

U.S. FMVSS CERTIFICATION.

REPAIR & PARTS MANUALS OR CD ROM DISC

FILTERS FOR FIRST SERVICE – OIL, FUEL, AIR,

SPECIFICATIONS

25 Cubic Yard High Density Rear Loading 60/40 Dual Compartment Refuse Collection/Compacting Body

Refuse Collection Body – General

INTENT:

This specification describes a hydraulically actuated split body & tailgate packer body of the rear loading type with the following minimum specifications necessary to perform the work assigned. The body shall be capable of compacting and transporting recyclables to a material recovery facility or other off-loading station and independently dispensing the loads by means of hydraulically ejecting the loads from each body.

GENERAL TERMS:

The manufacturer of all equipment provided under this contract shall be ISO 9001-2008 certified. All equipment furnished under this contract shall be new, unused and the same as the manufacturer's current production model. Accessories not specifically mentioned herein, but necessary to furnish complete unit ready for use, shall also be included. Unit shall conform to the best practice known to the body trade in design, quality of material and workmanship. Body shall be made in the United States of America. Assemblies, sub-assemblies and component parts shall be standard and interchangeable throughout the entire quantity of units as specified in this invitation to bid. The equipment furnished shall conform to ANSI Safety Standard Z245.1-2012.

WARRANTY:

Unit shall include a One-Year Complete Body warranty as standard. This warranty will cover parts and labor not including normal wear items.

PARTS MANUAL:

Bidder shall furnish one complete parts, maintenance, and operator's manual with each body sold.

BID QUOTATION (Minimum Bid Standards):

A. CAPACITY

1. The packer body shall have a capacity, excluding the receiving hopper, of not less than:

25 yd³

Street side (left) body shall be 10 Y³.

Curb side (right) body shall be 15 Y³.
2. The hoppers shall have a total capacity of two and six-tenths (2.6) cubic yards.
 - a. Street side (left) tailgate shall be 1.1 Y³.
 - b. Curb side (right) tailgate shall be 1.5 Y³.
3. The structural integrity of the bodies shall allow high density loading of up to 1,000 pounds per cubic yard maximum subject to the recycle commodity being collected.

B. BODY DIMENSIONS

1. Maximum outside width, 97".
2. Maximum overall length:
 - a. 25yd³ - 285"

3. Maximum height above chassis, 97".
4. Body inside width:
 - a. Street side (left), 32.31".
 - b. Curb side (right) 48.12".
5. Bodies (both) inside height, 81.5 inches.

C. BODY CONSTRUCTION

1. The body interior shall have a smooth floor without a trough. The sides and roof shall also be smooth.
2. In order to prevent damage from corrosion and fire, no hydraulic cylinders, valve or other hydraulic components shall come in contact with refuse packed into the body.
3. Body sides, roof and floor shall be reinforced so as to withstand continuous operation at maximum imposed loads without harmful deformation or excessive wear.
4. Body roof shall be minimum 8 gauge 80,000 PSI typical yield steel sheet.
5. Body roof reinforcements shall be 8" x 2 x .25" boxed shaped members, ASTM minimum 11 gauge 50,000 PSI typical yield.
6. Body sides shall be minimum 8 gauge 80,000 PSI typical yield steel sheet.
7. Center body divider shall be 7 gauge 80,000 PSI typical yield steel sheet.
8. Front corner reinforcements shall be 8.62" x 2.31" tapered front corners, minimum 8 gauge 80,000 PSI yield. Rear corner structure shall be 20" x 2.87" typical 7 gauge 80,000 PSI sheet metal.
9. Body floor shall be minimum 7 gauge 80,000 PSI typical yield steel sheet.
10. Floor long members shall be minimum 7 gauge 80,000 PSI typical yield formed channels.
11. Single piece floor cross members shall be 6" x 3" rectangular tube, interlaced through long members that are typical 7 gauge 80,000 PSI yield.
12. Two (2) side door access openings, 30" wide x 40" high, shall be provided to service the ejector panels and cylinders.
13. The body shall be undercoated with a Thixotropic material to provide protection to the underside of the refuse body.
14. The body and attaching parts shall be sealed with Tersotat® (or equivalent) Joint Sealer and Cavitycoat® (or equivalent) for rust prevention protection.

D. TAILGATE DIMENSIONS

1. Maximum overall width at the hopper opening shall be:
 - a. Street side (left), 35.69".
 - b. Curb side (right) 47.5".
2. Inside tailgate loading width shall be minimum of
 - a. Street side (left), 31.125".
 - b. Curb side (right) 43".
3. Hopper opening height shall be a minimum of 66.5".
4. Loading sill height shall be 5.187" below chassis rail.
5. Overall height above the chassis frame with the tailgate raised shall not exceed 134.69".

E. TAILGATE CONSTRUCTION

1. Tailgate sides shall be single piece 3/16", AR400 abrasion resistant plat steel with typical 184,000 PSI tensile strength and 145,000 PSI yield strength. Sides shall be reinforced with an interlaced network of 11 gauge hi-tensile steel channels.
2. Hooper floor shall be a minimum 1/4" AR400 abrasion resistant plat steel with typical 184,000 PSI tensile strength and 145,000 PSI typical yield strength.
3. Each tailgate shall have a hopper bottom liner made of 1/4" AR400 abrasion resistant plat steel with typical 184,000 PSI tensile strength and 145,000 PSI typical yield strength and hopper side liners made of 3/16" AR400 abrasion resistant plat steel with typical 184,000 PSI tensile strength and 145,000 PSI typical yield strength.
4. Two (2) grab handles (5/8" hot rolled steel bar) shall be located on outside of each of the tailgates for operator safety and comfort.
5. The rear steps shall be fabricated from 8" x 30" x 12 gauge diamond Grip Strut, slip resistant, self-cleaning material.
6. Each tailgate shall be raised, lowered, locked and unlocked with two (2) double acting 3" bore x 31" stroke hydraulic cylinders. The lock mechanism shall operate simultaneously with the raising and lowering of the tailgate. Four (4) 1 1/2" diameter lock pins shall be provided for each gate and spaced on 7" centers for proper load distribution. The sliding lock bar shall be a typical 1" x 4.5" ASTM-A36 material and shall be secured in the lock position by a manually placed 1 5/8" diameter pin at the outside. The cylinders shall incorporate an integral orifice which will limit the descent speed of the tailgate in the event of hydraulic failure.
7. The tailgate shall be equipped with a one piece, removable rubber gasket. The gasket shall extend across the entire bottom width of the tailgate and provide for water tight seal vertically up the side for no less than 45". The remaining height of the tailgate is sealed with .25" thick rubber flap to close off all opening and to prevent any liquids or refuse from exiting the body during compaction.
8. Each tailgate shall be equipped with a 1" NPT plug thus providing a 1 1/4" I.D. drain.

F. PACKING MECHANISM

1. The electrical push button operated packing cycle controls shall be located to the outside of each tailgate. The operator shall have the capability to start, stop and reverse the direction of any function at any time throughout the packing cycle and will have the ability to operate each function on each gate from either side.
2. Packing mechanism control valve shall be centrally located within the upper confines of the hopper, under the upper light cross members.
3. The packing cycle time shall be no greater than 15-17 seconds. Operator reload time shall be no greater than 9-10 seconds.
4. Packing mechanism shall consist of three primary structures; the inner slide, outer slide and packing blade.
 - a. Inner slide shall be mounted to the tailgate hinge structure with (2), 1 1/2" diameter chrome plated steel pins. The same pins shall support the base ends of the slide cylinders. (4) bearing bars shall be bolted to the upper and lower surfaces of the guide tubes, which interface with the outer slide.
 - b. Outer slide shall be pulled over the inner slide by (2) double acting, 4 1/2" bore x 2" rod x 33" stroke cushioned hydraulic cylinders. Abrasion resistant steel wear bars shall make contact with inner slide bearings to provide smooth linear movement.

- c. The packing blade shall be mounted to the outer slide with (2), 2 ¼" diameter, case hardened C1045 cold drawn steel pins. The blade shall be constructed with 7 gauge, 80,000 PSI yield strength steel. Two (2) double acting, 4" bore x 2 ½" rod x 21 5/8" stroke cushioned hydraulic cylinders shall exert a packing force of 63,800 pounds. The resultant packing pressure should be a minimum of 60 PSI for the street side (left) and 45 PSI for the curb side (right).
5. Linear movement of the packing blade shall be accomplished with bronze/aluminum welded wear bars. Rollers shall not be used. 2.12" x 4.625" x 15" shoes shall ride in a track integral to the tailgate sides. Pivotal movement of the blade shall be around 2.25" case hardened C1045 cold drawn steel pins retained in the packing blade.
6. All packing mechanism cylinders shall be within the confines of the tailgate shell to avoid hose damage from limbs and to protect the operator from contact.
7. Each hopper full of recycle material shall be compressed between the packing blade and ejector panel.
8. The packing mechanism shall be equipped with an "automatic crowd" pressure sensing device, which will enable the packing mechanism to find a path through the load which will neither stall the mechanism nor damage the structure thereby prolonging the hopper floor and mechanism life.

G. DISCHARGE OF LOAD

1. The load shall be discharged by means of two (2) positive ejection systems. Double acting, telescopic hydraulic cylinders shall extend and retract the ejector panels the full length of the body. The ejector cylinders shall attach to the body and the ejector panel via a cold-drawn, C1045, pin having a minimum diameter of 1 ½" and positioned diagonally to minimize possible damage from objectionable liquids.
2. The four (4) stage ejector cylinders shall have 6.5" x 5.5" x 4.5" x 3.5" bore x 3.0" rod.

25yd³ - 144.88" accumulated stroke
3. The ejector panel face sheet shall be constructed from 11 gauge hi-tensile steel. Five (5) ASTM A500 3.5" x .25" structural steel tubes shall span horizontally, with one (1) trapezoidal cross-member at floor level. The vertical panel corner posts shall be 3.5" x .25" wall ASTM 500 structural steel fully flanged on the rear for a tight wall fit and fully boxed with 11 gauge hi-tensile at the forward corner from top to bottom. An 11 gauge 50,000 PSI yield steel protective covering shall be provided to keep refuse from coming in contact with the ejector cylinder.
4. Smooth movement of the ejector panel in the body shall be achieved with four (4) UHMW pads on each side of the ejector panel. The pads shall be guided by a track, which shall be integral to the body side wall and shall also minimize pivotal movement of the ejector panel as refuse is packed against it.

H. CONTROLS

1. The ejector panel and tailgate raise controls for the left side of the body and tailgate raise shall be mounted outside the body on the front left hand side of the body. The ejector panel and tailgate raise controls for the right side of the body and tailgate raise shall be mounted outside the body on the front right hand side of the body. Direct connection of the control handles to the valve spool shall exist to minimize moving parts and allow for ease of service.
2. An electrical device shall be supplied to automatically raise the engine speed to the proper RPM during the packing cycle.

I. HYDRAULIC SYSTEM

1. The hydraulic pump shall be a front engine, crank driven, Denison tandem vane pump of 25 GPM @ 1200 RPM, each section. The combined flow shall be 50 GPM @ 1200 RPM. One pump section shall provide 25 GPM @ 1200 RPM to the left body cell and tailgate and one pump section shall provide 25 GPM @ 1200 RPM to the right body cell and tailgate. The pump shall be limited to a maximum of 62 GPM @ 1500 RPM. Pump shall comply with specification 219-2076 or equal.
2. The hydraulic pump shall be designed to operate continuously with peak loading at frequent, short intervals.
3. The hydraulic system shall incorporate adjustable relief valves to protect all components from excessive pressure and overloads.
4. The street side body valve and the curbside body valve shall be equipped with individual relief valves allowing the user to adjust hydraulic pressure separately for each ejector.
5. All hydraulic tubes will be securely clamped to prevent vibration, abrasion, and excessive noise.
6. All hydraulic hoses shall conform to S.A.E. standards for designed pressure. Bends shall not be less than recommended by S.A.E. standards.
7. The hydraulic oil reservoir shall have a minimum capacity of 52 gallons filled with hydraulic fluid.
8. The hydraulic oil reservoir shall be complete with a screened fill pipe and cap, filter breather, and clean out cover.
9. The hydraulic system shall be protected by a three (3) micron return line in-tank filter element with magnetic trap.
10. All multi-spool control valves shall be of a sectional design such that servicing would not require replacement of the entire valve assembly.

J. HYDRAULIC CYLINDERS

1. All non-telescopic cylinders must have a working pressure rating of no less than 2500 PSI.
2. Packing and slide cylinders must be of the internal cushion design so that hydraulic shock and audible noise is minimized. This shall be accomplished by a design which will decrease the speed of the cylinder for the last three quarter (3/4") of cylinder stroke on both directions of travel.
3. Rods of packing and slide cylinders must be induction hardened to a surface hardness of 60-65 Rockwell C scale with a case depth of .030".
4. Rods of packing and slide cylinders shall be chrome plated.
5. All packing cylinder end lugs shall be forged steel material.

K. ELECTRICAL

1. All electrical wiring connectors to be sealed, with wiring in split convoluted loom.
2. All wiring connections to be ultrasonic welded with rubber molded covering or crimp type connectors with shrink-wrap. Unprotected wiring in any application is unacceptable.
3. All electrical proximity switches shall be epoxy impregnated to minimize effects of excess moisture.

L. LIGHTING

1. Clearance lights, a back-up, four (4) directional lights and five (5) brake lights shall have DOT rated lens, shock mounted in a protective housing. The whole unit shall be pop out and replaceable.
2. All lights shall be LED and provided in accordance with FMVSS#108, plus mid body turn signals on each side of the

body and a center brake light on the rear. Direction and brake lights are dispersed to position two (2) each above the hopper and two (2) each below the hopper.

M. PAINTING

1. First Step – Smoothing - All weld slag, splatter or roughness shall be removed with the appropriate hand tools. No sand, shot or glass air blasting shall be permitted to eliminate contamination and possible damage to bearings or pin surfaces and possible distortion of higher gauge sheet materials used on the body.
2. Second Step – Purgation - A heated pressure wash shall drench the entire body with a silicate alkaline phosphate based pre-cleaner to clean all metal surfaces. This solution shall soak through and break down the oil film and other contaminants found on steel. The solution shall be non-corrosive to metals and shall be environmentally friendly.
3. Third Step – Pre-Treatment – An organically accelerated phosphoric acid based pretreatment will be applied to all metal surfaces. This step provides a chemical conversion coating which changes the chemical and physical nature of the surface by providing a surface that the next application (prime) will adhere to.
4. Fourth Step – Sealing - The entire body shall be coated with an application of the patented Dry-In-Place Seal from Henkel Surface Technologies. This process shall dramatically improve the surface finish's resistance to rusting that occurs from general wear and tear, and shall provide improvements to paint adhesion and other related corrosion that occurs over the life of the products. This shall help retain the "as new" appearance of the factory paint surface.
5. Fifth Step - Primer Coat Paint - The seal coat shall be painted using DuPont Corlar® - a high performance, low VOC/HAPS epoxy polyamide primer-sealer. Corlar® is a two-component gray primer-sealer that is lead and chromate free. This shall be applied in an amount necessary to achieve a dry film thickness of 1.2 mil.
6. Sixth Step - Finish Top Coat Paint - A high luster finish coat shall be applied using DuPont Imron Elite® – a high-performance, low VOC (<3.5 lbs/gal RTS) two-component polyurethane enamel. An ample amount shall be applied to achieve a dry film thickness of 2 mil and shall result in a finish of 3.2 mil minimum film thickness.

Note: Exceptions to this bid to be put on separate sheet

BID FORM

DATE: _____

To the Director of Public Works for the City of Waterville, Maine:

Please accept this bid submission from

(hereinafter called "Bidder"), a corporation* organized under the laws of the
State of _____ or a partnership/individual** doing business as

This bid is being submitted for a **Dual axle Cab/Chassis 66.000 G.V.W. 25 Cubic Yard High Density Rear Loading Refuse Collection/Compacting Body** in compliance with your invitation for bids, having examined the specifications and conditions contained therein. Alternatives/Substitutions are as follows:

(Attach Additional Comments, As Necessary)

The Bidder proposes to supply the following:

Bid Option #1: (Per Specifications) No Trade-In Allowance \$ _____

Bid Option #2: (Per Specifications) With Trade-In Allowance

1999 Volvo WG64 / 2007 Heil Formula 5000 25 CY Packer

Body - \$ _____

Extended Warranty: **Provide Description Summary** \$ _____

**Delivery Guaranteed within _____ days of contract award and not beyond ninety (90) days of contract award.

NAME OF BIDDER: _____

BY: _____

(Signature)

NAME AND TITLE: _____

ADDRESS: _____

TELEPHONE: _____ TAX ID# _____

* Affix seal if by Corporation

**Cross out word/phrases that do not apply